

1. MALININ, R.
2. USSR (600)
4. Vacuum Tubes
7. Electron tube, Kinomekhanik, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

MALININ, R.

Vacuum tubes; conclusion. Kinomekhanik no.4:43-45 4p '53. (MLBA 6:6)  
(Vacuum tubes)

**MALININ, R.**

Principles of vacuum-tube amplifiers. Kinomekhanik no.6:39-44 Je '53.  
(MLA 6:8)  
(Amplifiers, Vacuum-tube)

**MALININ, R.**

Measurement of level in decibels. Radio no.6:56-58 Je '53. (MLBA 6:6)  
(Radio measurements) (Decibels)

MALININ, R.

Cascades for preamplifiers. Kinomekhanik no.7:38-42 J1 '53. (MLBA 6:8)  
(Amplifiers, Vacuum-tube)

**MALININ, R.**

Terminal stage of the cascade amplifier. *Kinomekhanik* no.8:37-41 *Ag* '53.  
(*MLRA* 6:8)  
(Amplifiers, Vacuum-tube)

MALININ, R.

Preterminal inverted-phase cascade amplifier. *Kinomekhanik* no.9:36-41  
S '53. (MLBA 6:9)  
(Amplifiers, Vacuum tube)

**MALININ, R.**

**Negative feedback coupling. Kinomekhanik no.11:36-42 N '53. (MLRA 6:11)**  
**(Sound--Recording and reproducing) (Amplifiers, Vacuum-tube)**



**MALININ, R.**

**Electric power supply of amplifiers. Kinomekhanik no.12:35-40**  
**D '53. (MIRA 6:12)**  
**(Amplifiers, Vacuum-tube)**

SOV/107-58-12-38/55

9(2)

AUTHOR:

Malinin, R.

TITLE:

Rectifiers on Transistor Diodes (Vypriamiteli na poluprovodnikovyykh diodakh)

PERIODICAL:

Radio, 1958, Nr 12, pp 35-36 and 42 (USSR)

ABSTRACT:

The author explains how to use transistor diodes in rectifiers, and their operating conditions. For example, a transistor diode can only give a nominal rectified current if it is used in a half-wave rectifier circuit without a smoothing filter, i.e. working directly on an active load (Figure 1) and if the temperature of the surrounding air is not higher than 20-25°C. When a junction-type diode is used in a rectifier with a filter, having a capacitor on its input (Figure 3), the normal working regime of the diode can only be guaranteed if the rectified current is reduced by 2-3 times compared with the

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Rectifiers on Transistor Diodes

normal. A full-wave rectifier with one or more in-series connected diodes in each leg (Figure 4) or a bridge circuit rectifier can give a rectified current twice as high as a half-wave rectifier. The author shows that the amplitude of the reverse voltage of the diode  $U_{obr}$  is equal to that of the ac voltage  $U_2$  coming to the diode from the secondary winding of the power transformer only in the absence of a filter in the rectifier (Figures 1, 2) and if the temperature does not exceed 20-25°C. However, when the rectifier works with a smoothing filter and with a capacitor on its input (Figures 3,4) then the amplitude of the reverse voltage on the diode is composed of the amplitude of the ac voltage on the secondary winding of the transformer and the dc voltage on the input capa-

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# Rectifiers on Transistor Diodes

citor of the filter. The author then explains how to use diodes in rectifiers for large voltages and to distribute the combined reverse voltage between the diodes. He gives the following formula for calculating the minimum number of diodes (n) needed in a half-wave rectifier (Figure 5) or in each leg of a full-wave rectifier (Figure 6) when bridging diodes with resistances;

$$= \frac{3.5 U_o}{U_{obr}} \text{ where } U_o \text{ is the voltage on the}$$

input capacitor and  $U_{obr}$  relates to one diode.

The minimum number of diodes needed in each leg of a bridge circuit (Figure 7) is calculated by the formula

$$= \frac{1.8 U_o}{U_{obr}} .$$

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Rectifiers on Transistor Diodes

The author gives instructions for testing the diodes and also another formula for calculating the number of diodes to be used in a given rectifier. The article also contains a table showing the routine operating conditions of various types of semiconductor junction type diodes at various temperatures. There are 7 circuit diagrams and 1 table.

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PHASE I BOOK EVALUATION

SL 100

Malinin, Roman Mikhaylovich

Kondensatory i soprotivleniya (Capacitors and Resistors); Moscow, Voen. izd-vo M-va obor. SSSR, 1959. 174 p. No. of copies printed not given.

Ed.: Ye. P. Belyayev, Engineer, Lt. Colonel; Tech. Ed.: T. F. Myasnikova.

PURPOSE: The book is intended for military personnel engaged in the operation of radio equipment. It is also intended for radio amateurs.

COVERAGE: The book discusses the processes occurring in capacitors and resistors. The most generally used types of capacitors and resistors and also new types accepted by the Soviet radio industry are described. Tables of basic electrical characteristics of the most commonly used capacitors and resistors are included. Information on their behavior in radio equipment is presented and several practical recommendations as to their use are given. No personalities are mentioned. There are 43 references, all Soviet.

~~Card 45~~

ALEKSEYEV, S.M.; BOL'SHOV, V.M.; VITKOV, M.G.; GUKIN, V.I.; IVANOV,  
V.M.; MALININ, R.M.; PILTAKYAN, A.M.; PLENKIN, Yu.N.;  
SOBOLEVSKIY, A.G.; BURLYAND, V.A., red.; BORUNOV, N.I.,  
tekhn. red.

[Handbook for beginning radio amateurs] Spravochnik nach-  
naiushchego radioliubitelia. Pod obshchei red. R.M.Malinina.  
Izd.2., stereotipnoe. Moskva, Gosenergoizdat, 1963. 623 p.  
(Massovaya radiobiblioteka, no.400) (MIRA 16:5)  
(Radio--Handbooks, manuals, etc.)  
(Radio operators--Handbooks, manuals, etc.)

MALININ, Roman Mikhaylovich; KUZ' MINOV, A.I., red.; FRIDKIN, L.M.,  
tekhn. red.

[Output transformers] Vykhodnye transformatory. Moskva,  
Gosenergoizdat, 1963. 31 p. (Massovaia radiobiblioteka.  
Spravochnaia seriia, no.471) (MIRA 16:11)  
(Electric transformers) (Radio--Transformers)



MIKHAYLOV, Igor' Vasil'yevich; PROPOSHIN, Aleksandr Il'ich;  
MELNIN, N.M., red.

[Condensers] Kondensatory. Moskva, Energiia, 1965. 31 p.  
Massovaia radiobiblioteka. Spravochnaia seria, no.573,  
(IRA 18:4)

NAUMOV, G.; MALININ, S.; BRYZGALIN, O.

Sixth conference on Experimental and Technical Mineralogy and  
Petrography. Geokhimiya no.8:716 '61. (MIRA 17:3)

ONUSHKIN, Viktor Grigor'yevich; MALININ, Sergey Aleksandrovich; FURAYEV,  
V.K., kand.istor.nauk, nauchnyy red.; VASIL'YEV, A.V., red.  
izd-va; GURDZHIYEV, A.M., tekhn.red.

[Imperialist nature of "the atomic program" of the U.S.A.]  
Imperialisticheskaya sushchnost' "atomnoi programmy" SShA.  
Leningrad, Ob-vo po rasprostraneniю polit. i nauchn.znaniy  
RSFSR, Leningr.otd-nie, 1959. 45 p. (MIRA 13:5)  
(United States--atomic power)

MALININ, S. D.

Experimental characteristics of a part of the system  $H_2O$ - $CO_2$ .  
 7N. I. Khitarov and S. D. Malinin (V. I. Veranskii Inst. Geophys. and Anal. Chem., Inst. Sci. U.S.S.R., Moscow). *Dokl. Akad. Nauk SSSR*, 1967, 170, 5, 13-17. In order to fill gaps in existing literature data, a series of expts. were made that pertain to the part of the system  $H_2O$ - $CO_2$  within temp. limits up to 500° and at pressures up to 800 kg./sq. cm. and at soln. concns. up to 50% (by wt.) of  $CO_2$ . Expts. were made in an isothermal cell. Pressures were measured with a Bourdon-type manometer with an error of  $\pm 2.6$  kg./sq. cm. Temps. were meas-

Pressures were measured with a Bourdon-type manometer with an error of  $\pm 0.5$  kg./sq. cm. Temps. were measured with a chromel-alumel thermocouple that gave a  $\pm 2.0^\circ$  error of temp. control. Water was introduced into the autoclave from a microburette with an error of about 0.1 mg.  $\text{CO}_2$  was weighed as the solid with an error of about  $\pm 0.1$  g. and placed in the stainless-steel holder in the autoclave. Corrections of  $\sim 0.2$  g.  $\text{CO}_2$  were introduced into the autoclave, to compensate for  $\text{CO}_2$  loss before sealing of the autoclave. Curves plotted from results of direct and reverse course of observations served as a criterion of attainment of equilibrium. Results were corrected for thermal expansion. A special series of expts. on study of pressure-temp. relations of the system  $\text{H}_2\text{O}-\text{CO}_2$  without stirring showed that the pressure-temp. curves plotted by heating and followed by gradual cooling did not agree for regions of temp. toward the crit. point of water.

Oladya B. Macy

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MALININ, S.D.

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27  
 Solubility of lead chloride in water in the liquid and vapor phases. S. D. Malinin (V. I. Vernadskii Inst. Geochem. and Anal. Chem., Acad. Sci. U.S.S.R., Moscow). *Tr. Akad. Nauk SSSR*, No. 1, 57-62. -- Abstract, study of soly. of  $PbCl_2$  in water at temps. above  $100^\circ$ . Soly. in both liquid and vapor phase was studied. Work was done by the method of indirect selection of samples that were chemically analyzed. Soly. of  $PbCl_2$  was studied up to  $320^\circ$  in the vapor phase and to  $320^\circ$  in the liquid phase. For detn. of the vap. phase soly. a cylindrical Ipatieff autoclave system was used. Accuracy of temp. control by Chromel-plumel thermocouples was no less than  $\pm 2.5^\circ$ . The autoclave was placed in a furnace and heated to the required temp. and left there for 3 hrs. with continuous stirring. It was found, however, that equil. was attained much more rapidly than after 3 hrs. Soly. of  $PbCl_2$  in the vapor phase was studied at temps. from  $300^\circ$  to  $370^\circ$ . Above  $370^\circ$  it was impossible to make measurements in the app. described. The same autoclave app. was used for study of soly. in the liquid phase. Soly. of  $PbCl_2$  in water in the liquid phase was studied in the  $100-320^\circ$  temp. range. The upper limit was set by the corroding action of the soln. on the autoclave. Pb in the samples was detd. potentiographically in  $HNO_3$  medium (for small quantities) and volumetrically for analysis of liquid-phase samples. In the latter method Pb was pptd. as the chromate from  $HOAc$  medium, dissolved in chloride soln., and titrated iodometri-

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MALLIN, S. D.

soly. In all, 11 measurements were made for soly. in the liquid phase and 20 for the vapor phase. In the vapor phase the soly. of  $PbCl_2$  was 910 mg./l. at  $380^\circ$  and in the liquid phase it was 216 g./l. at  $320^\circ$ . For the liquid phase the soly. value is linearly dependent on the reciprocal of the abs. temp. only to  $60-100^\circ$ ; above that there is deviation from the law of soly. of slightly sol. salts. The course of the soly. curves of  $PbCl_2$  in liquid and vapor phases of water indicates the approach of  $PbCl_2$  to the class of salts having a pos. temp. coeff. of soly. A cross-sectional diagram of the app. is provided, and soly. curves are presented.

Gladya B. Maerz

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2/2

5(4)

AUTHORS: Khitarov, N. I., Malinin, S. D.

SOV/7-58-7-8/13

TITLE: News in Brief (Kratkiye soobshcheniya) On the Equilibrium Phase Relations in the System  $H_2O-CO_2$  (O ravnovesnykh fazovykh otnosheniyakh v sisteme  $H_2O-CO_2$ )

PERIODICAL: Geokhimiya, 1958, Nr 7, pp 678 - 679 (USSR)

ABSTRACT: The system  $H_2O-CO_2$  was investigated in the range of from 200 to 300°C and under pressures of up to 600 kg/cm<sup>2</sup>. The result of the investigations, which were carried out in the Laboratoriya ma matogennykh protsessov (Laboratory for Magmatogeneous Processes), is a pressure-concentration diagram where the equilibrium curves for 50, 200, 250, 300, and 330°C are plotted. The following facts can be learned from the diagram: 1) The solubility of carbon dioxide increases markedly with pressure and temperature. 2) Beginning with a cert in temper ture, which depends upon pressure, the solubility isobar passes a minimum value. 3) Regarding an isotherm the  $CO_2$ -content passes a maximum. 4) The isothermal lines for 300 and 330° C form a loop,

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News in Brief. On the Equilibrium Phase Relations in the SOV/7-58-7-8/13  
System  $H_2O-CO_2$

i.e. beginning with a certain temperature there is only one phase left. Furthermore the authors observed that by dissolving  $CO_2$  in water the critical temperature of the latter is decreased. There are 1 figure and 4 references, 2 of which are Soviet.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytic Chemistry ineni V.I. Vernadskiy, AS USSR, Moscow)

SUBMITTED: August 3, 1958

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5(4)

AUTHOR:

Malinin, S. D.

SOV/7-59-3-4/13

TITLE:

The System  $H_2O - CO_2$  at High Temperatures and Pressures  
(Sistema  $H_2O - CO_2$  pri vysokikh temperaturakh i davleniyakh)

PERIODICAL:

Geokhimiya, 1959, Nr 3, pp 235-245 (USSR)

ABSTRACT:

The investigation was carried out at the laboratoriya magmatogennykh protsessov (Laboratory for Magmatogenic Processes) under the supervision of N. I. Khitarov. T. I. Shekhanova took part in experimental work. The apparatus used for experiments and for analyzing samples are schematically represented by figures 4 and 5. For temperature regulation the device MRShchPr-54 and for pressure measurement a reference manometer having a limit of accuracy of 0.35 was used. Investigations were carried out within the ranges of from 200 to 330°C and from 100 to 500 kg/cm<sup>2</sup>. Experimental results are shown by table 1 A and figure 6; herefrom the diagram of the system is obtained (figure 7). The equation for the solubility of gas in liquid holds in the system under investigation up to 250°C. An aqueous salt solution -  $CO_2$  was

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investigated within the ranges of from 100 to 400 kg/cm<sup>2</sup> and

The System  $H_2O - CO_2$  at High Temperatures  
and Pressures

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from 200 to 300°C; a 10% solution of  $CaCl_2$  was used (Table 2, Fig 9). Solubility is less by 1.5 times to twice the amount than in pure water, the general course taken by the curves is similar. There are 9 figures, 3 tables, and 11 references, 5 of which are Soviet.

ASSOCIATION:

Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva (Institute for Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy, AS USSR Moscow)

SUBMITTED:

January 27, 1959

Jard 2/2

MALININ, S.D., nauchnyy sotr. [translator]; NOVIKOV, Yu.P., nauchnyy sotr. [translator]; POPOV, A.A., nauchnyy sotr. [translator]; TRUSOV, Yu.P., nauchnyy sotr. [translator]; YAROSHEVSKIY, A.A., nauchnyy sotr. [translator]; SHCHERBINA, V.V., red.; ZNAMENSKAYA, V.K., red.; PRIDANTSEVA, S.V., tekhn. red.

[Thermodynamics of geochemical processes] Termodinamika geokhimi-  
cheskikh protsessov; sbornik statei. Moskva, Izd-vo inostr. lit-ry,  
1960. 270 p. (MIRA 14:7)

1. Institut geokhimii i analiticheskoy khimii im. Vernadskogo AN  
SSSR (for Malinin, Novikov, Popov, Trusov, Yaroshevskiy)  
(Geochemistry)

S.D. MALININ (USSR)

"Estimation of ph values of the carbonaceous hydrotherms."

Report presented at the Conference on Chemistry of the Earth's Crust,  
Moscow, 14-19 Mar 63.

MALININ, S.G.

In the Central Institute of Scientific and Technological Information  
and Standardization in the Electric Machinery Industry. NTI  
no.9:9-11 '63. (MIRA 16:12)

SOV/110-58-12-19/22

AUTHORS: Malinin, S.G., Engineer and Livyant, V.Z., Engineer

TITLE: An All-Union Conference on Large-Unit Packaged  
Electrical Equipment (Vsesoyuznoye soveshchaniye po  
komplektnomu krupnoblochnomu elektrooborudovaniyu)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Nr 12, pp 70-73 (USSR)

ABSTRACT: An All-Union Conference was held in Leningrad on the  
design and manufacture of large-unit packaged electrical  
equipment for high and low voltages. The conference  
was attended by more than 500 delegates of Councils of  
National Economy, Ministries and Committees, Works,  
Power Stations, Construction, Erection, Research and  
Design Organisations; groups of delegates from  
agricultural organisations also participated. An  
exhibition of packaged electrical equipment proved  
very popular. The advantages of packaged equipment in  
cutting down erection time and saving skilled labour  
are explained. A brief review of the manufacture of  
packaged equipment in the Soviet Union is given.  
The representative of GOSPLAN USSR, V.S.Tulin, reviewed  
the main problems in developing and manufacturing  
packaged electrical equipment in the period 1959-65.

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SOV/110-58-12-19/22

An All-Union Conference on Large-Unit Packaged Electrical Equipment

The representative of the Ministry of Power Stations, A.M.Kri vorotov, described the use of standard series of packaged electrical equipment in power stations and sub-stations. L.M.Kanevskiy reported on the proposed distribution of production of packaged equipment between different factories. Reports on the design of new series of packaged electrical equipment were delivered by V.A.Grachev, V.V.Girshberg and A.A.Goldobekov. I.R.Klasson described foreign packaged distribution equipment for 220 kV. The following representatives of factories also gave reports: L.S.Shugayev, V.M.Ovcharov, P.P.Burak, B.V.Olendzskiy, V.S.Kindyakov, K.A.Movsesyan, I.N.Shteynberg, A.A.Podushkin, G.F.Edel'shteyn, D.S.Itenberg, G.Ya.Kazakevich, V.A.Yuditskiy, L.Z.Arkus, L.K.Greyner and others. Users of packaged equipment, notably in agriculture, power stations, coal, metallurgical, oil and other industries claimed that not enough such equipment is yet produced and the quality is often poor. Production of this type of equipment must be developed

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An All-Union Conference on Large-Unit Packaged Electrical Equipment

and the quality improved. It is necessary to reduce the size of control and protection panels and to bring the various types of control equipment together on a single panel where necessary. The equipment fitted on the panels must be made much smaller. A number of detailed recommendations about types of construction are given.

Card 3/3

*Malinin; S.I.*

U.S.S.R.

Water method of mechanical analysis of sediments.

E. I. Malinin. *Trudy Inst. Okeanol., Akad. Nauk S.S.S.R.* 8, 242-62 (1951).—Osborn's modified H<sub>2</sub>O method of mech. analysis of sediments is not accurate. Drying by this method leads to cementation of the sediments by means of irreversible coagulation of some colloids. The aggregates formed are artificial and their sizes depend on sieves used. Only by complete artificial breakdown of the dried sediments can one obtain an approx. idea on the mech. compn. of the sediments. This method does not give an accurate picture of the granulometric compn. of silting sediments and leads to the prepn. of inaccurate maps and wrong ideas on the hydrodynamics of reservoir. Some fraction of the silting sediments cannot be used in mineralogical investigation with reference to the ratio of heavy to light minerals in the sediment. The method requires much time. It can be used for highly sandy sediments contg. small quantities of org. matters. A precise idea on the granulometric compn. of sediments can be achieved only by working with wet initial materials and speedily, thus averting coagulation.

M. Charmandarian

**MALININ, S.I.**

**Some readjustments in the mechanical analysis by the pipette  
method. BiulMOIP. Otd.geol. 29 no.2:101 Mr-Ap '54.(MLRA 7:7)  
(Pipettes) (Deep-sea deposits)**

VASIL'YEV, Petr Vasil'yevich; MALININ, Sergey Ivanovich; KOROLEVA, T.I.,  
red.izd-va; SHALYAR, S.Ya., tekhn.red.

[Effect of basic geological factors on the behavior of rocks in  
boreholes] Vliianie osnovnykh geologicheskikh faktorov na pove-  
denie porod v gornykh vyrabotkakh. Moskva, Gos.nauchno-tekhn.  
izd-vo lit-ry po gornomu delu, 1960. 92 p. (MIRA 13:3)  
(Petrology)

MALININ, Sergey Ivanovich

[Secondary changes in rocks containing fossil coal]  
Vtorichnye izmeneniia porod, vmeshchaiushchikh  
iskopaemye ugli. Moskva, Izd-vo Akad. nauk SSSR, 1963.  
131 p. plates. (MIRA 19:1)

--MALININ, Sergey-Mikhailovich; MOTUZ, K., red.; KALECHYTS, G.,  
tekhn. red.

[Role of industry in creating the material and technical foundation of communism] Rolia pramyсловastsi u stvarenni materyial'na-tekhnichnai bazy kamunizma. Minsk, Dziarzh.vyd-va BSSR. Red. spatsial'na-ekonomicchnai lit-ry, 1962. 55 p. (MIRA 15:11)  
(Russia--Industries)

Malinin, S.N. "The development of the industry of the BSSR, during 30 years of Soviet power", In the collection: Materialy noyabr'skoy sessii Akad. nauk BSSR, 1947, Minsk, 1949, p. 21-36.

SO: U-4393, 19 August 53, (Letopis 'Zhurnal 'nykh Statey', No. 22, 1949).

MALININ, S.N. [Malinin, S.M.]; POPOV, A.N. [Papou, A.M.]; DUBOVIK, P.,  
red.; SLAVYANIN, I., tekhn.red.

[National economy of the White Russian S.S.R. during the seven-  
year plan] Narodnaia haspadarka Belaruskai SSR u siamihodtsy.  
Minsk, Dziarzh.vyd-va BSSR. Red.masava-palit.lit-ry, 1959. 80 p.  
(MIRA 13:4)

(White Russia--Economic policy)



MALININ, Sergey Nikolayevich; IPPA, Maksim Moiseyevich; KUZNETSOV,  
P.V., red.; PONOMAREVA, A.A., tekhn.red.

[The economy of White Russia and prospects for its development]  
Ekonomika Belorusskoi SSR i perspektivy ee razvitiia. Moskva,  
Gosplanizdat, 1960. 235 p. (MIRA 14:2)  
(White Russia--Economic policy)

LUKASHEV, Konstantin Ignat'yevich; MALININ, Sergey Nikolayevich;  
STRIZHONOK, M., red.; VOLOKHANOVICH, I., tekhn. red.

[Resources and development of the productive forces of  
White Russia in the seven-year plan] Resursy i razvitie  
proizvoditel'nykh sil BSSR v semiletke. Minsk, Izd-vo  
Akad. nauk BSSR, 1961. 107 p. (MIRA 14:5)  
(White Russia--Natural resources)  
(White Russia--Economic policy)

MALININ, Sergey Nikolayevich; IPPA, Maksim Moiseyevich; RAZUMENKO,  
Aleksey Venediktovich; MOTUZ, K., red.

[Economy of White Russia at the present-day stage] Narod-  
noe khoziaistvo Belorussii na sovremennom etape. Minsk,  
Belarus', 1964. 156 p. (MIRA 17:12)

MALININ, V.A.

Valuable work on the origins of religion. ("The origins of religion"  
Charles Enshlen. Reviewed by V.A.Malinin). Nauka i zhizn' 22 no.4:  
61-62 Ap '55. (MLRA 8:6)

(Religions)

POPOV, A.A., inzh.; FAYZGLIN, A.M., inzh.; MALININ, V.A., inzh.;  
CHEREpanov, N.R., inzh.; SHALAYEV, V.V., inzh.

Improving boring and blasting operations in open pits. Vzryv.  
delo no.51/8:143-149 '63. (MIRA 16:6)

(Boring) (Blasting)

MALININ, V.A., gornyy inzh.; FAYZULLIN, A.M., gornyy inzh.

Using igdanite, charges with air space, and combination  
charging of boreholes. Vzryv. delo no.54/11:282-291 '64.  
(MIRA 17:9)

ORLOV, L.I.; MALININ, V.F.

Laboratory method of studying the pore space of carbonate rocks.  
Razved.i prom.geofiz. no.44:127-129 '62. (MIRA 15:7)  
(Rocks, Carbonate)

MALININ, V. I.

AID P - 3691

Subject : USSR/Aeronautics

Card 1/1 Pub. 135 - 18/22

Author : Baskakov, V. Ye., Maj. and Malinin, V. I., Maj.

Title : More good films on Soviet fliers

Periodical : Vest. vozd. flota, 1, 83-86, Ja 1956

Abstract : A review of recent films on Soviet fliers. Names are given.

Institution : None

Submitted : No date



MALININ, V. M., Engineer

"Investigation of Cast Cutting Tools Made by the Precision Casting Method." Thesis for degree of Cand. Technical Sci. Sub 28 Jun 49, Moscow Automotive Mechanics Inst.

Summary 82, 18 Dec 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva. Jan-Dec 1949.

*MALININ, V.M.*

MALININ, V.M.; AGEYEV, V.G.

Apparatus for preventing fibrillation. Med. prom. 11 no.3:56-58  
Mr '57 (MLBA 10:4)

1. Nauchno-issledovatel'skiy institut eksperimental'noy  
khirurgicheskoy apparatury i instrumentov.  
(MEDICAL INSTRUMENTS AND APPARATUS) (ARRHYTHMIA)

Belyakov, P. D., Malinin, V. M., and Rosenblit, Yu. A.

"A universal electrothermometer for clinical and laboratory investigations." Novye khirurgicheskie apparaty i instrumenty i opyt ikh primeneniya, No. 2, 1958, p. 55.

USSR / General and Special Zoology. Insects.

P

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16403

Author : Malinin V.M.

Inst : Not given

Title : The Effectiveness of Calcium Arsenite and DDT  
in the Control of the Deleterious Burygaster.  
(Effectivnost' arsenita kal'tsia i DDT v bor'be  
s vrednoi cherepashkoi).

Orig Pub: Izv. AN UzSSR, 1956, No 6, 57-58

Abstract: Decrease of fat in bugs from 33% to 23.9% when they emerged from hibernation did not increase their destruction by DDT. According to laboratory tests DDT was more toxic in the case of males, than in females, while the toxicity of calcium arsenite was the same in males and in females and very high in a dose of 4 kg per hectare. The Eurygaster

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Card 2/3

APPROVED FOR RELEASE: 06/20/2000

CIA-RDP86-00513R001031810015-1"

USSR / General and Special Zoology. Insects.

Abs Jour: Ref Zhur-Biol., No 4, 1958, 16403

Abstract: ature at a depth of 7 cm from seven degrees and higher (seven degrees was the threshold of the development of eurygaster ovaries at the time of their emergence from the diapause) are summarized; then the indices of the squares of the average air temperatures above nine degrees are added up; mass egg-laying begins when the sums of the squares of soil and air temperatures will reach a constant 9000 degrees.

.Card 3/3

MALININ, V. M.

USSR/Chemical Technology -- Chemical Products and Their Application. Pesticides,  
I-7

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1466

Author: Malinin, V. M.

Institution: None

Title: Results from Field Tests of "Merkaptofos" and "Oktametil" in the  
Control of the Cotton Bollworm

Original

Periodical: Sots. s. kh. Uzbekistana, 1956, No 6, 76-77

Abstract: Field tests with 0.1 and 0.2% aqueous solutions of "Merkaptofos"  
/mercaptophosphate/ (I) and 0.3% aqueous solutions of "Oktametil"  
/OMPA?/ (II), using application doses of 600 l/ha, show that I and  
II are much more effective against the cotton bollworm than lime-  
sulfur.

Card 1/1

MALININ, V.M.

Effectiveness of calcium arsenite and DDT in controlling *Eurygaster*  
*integriceps*. Izv. AN Uz.SSR no.8:57-68 '56. (MIRA 12:7)  
(DDT) (Calcium arsenite) (*Eurygaster*s)

✓  
USSR / General and Specialized Zoology. Insects. Harmful Insects and Acarids. Pests of the Technical, Oil, Medicinal and Essential-Oil Cultures. F

Abs Jour : Ref Zhur - Biol., No 18, 1958, No. 82972

Author : Malinin, V. I.

Inst : Not given

Title : The Effectiveness of Introducing Octamethyl and Mercaptophos Into the Soil in the Struggle Against the Spider Mite on the Cotton Plant

Orig Pub : Sots. s. kh. Uzbekistana, 1957, No 3, 28-30

Abstract : According to laboratory and small-plot experiments in the Ferganskaya Oblast in 1954-56, it is expedient to put to test the presowing moistening of cotton seeds in a solution of octamethyl of a concentration not greater than 0.2%. Mercaptophos (4 kg/hectare), introduced into the soil with nitrogenous fertilizers during the period of

Card 1/2



USSR / General and Specialized Zoology. Insects. Harmful Insects P  
and Acarids. Pests of the Technical, Oil, Medicinal and  
Essential-Oil Cultures.

Abs Jour : Ref Zhur - Biol., No 18, 1958, No. 82972

cotton vegetation, reduces the mite numbers to economically insignificant dimensions. Octamethyl, introduced in the quantity of 3 kg/hectare, is somewhat weaker. With equal outlays of Mercaptophos, the poisoning of the roots, although less effective than spraying, is quite satisfactory. With the introduction of octamethyl to the amount of 8 kg/hectare, with superphosphates, under autumn ploughing, the mite numbers remained, during the course of the entire season, economically insignificant. The results of the experiments demand a check-up of the industry. -- A. P. Adrianov

Card 2/2

MALININ, V.M.

Our corrections. Zashch. rast. ot vrod. i bol. 3 no.4:37-38  
J1-Ag '58. (MIRA 11:9)

1. Zaveduyushchiy otdelom zashchity rasteniy Ferganskoy zonal'noy  
opytnoy stantsii.  
(Plants, Protection of)

MALININ, V. M.

Unsolved problem in cotton protection. Zashch. rast. ot vred.  
1 bol. 5 no. 5:12 My '60. (MIRA 16:1)

1. Zaveduyushchiy Izbaskentskim entomofitouchastkom.

(Uzbekistan--Cotton--Diseases and pests)  
(Uzbekistan--Red spider--Extermination)

MIRPULATOVA, N.S.; MALININ, V.M.

Wilt of fine-fiber cotton plant. Zashch.rast.ot vred.i bol. 7  
no.4:56 Ap '62. (MIRA 15:12)

1. Zaveduyushchiy laboratoriyey Uzbekskogo instituta zashchity rasteniy, Tashkent (for Mirupulatova). 2. Zaveduyushchiy Izbaskentskim entomofitouchastkom (for Malinin).  
(Cotton wilt)

MALININ, V.H., mladshiy nauchnyy sotrudnik

Increase of the resistance of cotton varieties to wilt.

Zashch. rast. ot vred. 1 bol. 9 no.10:14-15 '64  
(MIRA 18:1)

1. Izbaskentskiy entomo-fitopatologicheskiy uchastok, Andizhanskaya oblast'.

POTLAYCHUK, V.I., kand.sel'skokhoz.nauk; SOLOMAKHINA, V.M., kand.biolog.nauk;  
SEMAKOV, V.V., nauchnyy sotrudnik; NELIN, Ye.S., nauchnyy sotrudnik;  
MOROZOVA, A.T., assistent; MALININ, V.M.; KOROL', A.P.; BYKOVA, Ye.P.,  
mladshiy nauchnyy sotrudnik; CHKHUBIANISHVILI, TS.A., mladshiy  
nauchnyy sotrudnik; ASKAROVA, S.A., kand.biolog.nauk; IOFFE, R.Ya.,  
kand.sel'skokhoz.nauk

Brief information. Zashch.rast. ot vred. i bol. 9 no.11:51-53

'64.

(MIRA 18:2)

1. Vsesoyuznyy institut zashchity rasteniy (for Potlaychuk, Bykova).
2. Kiyevskiy universitet (for Solomakhina).
3. Kamchatskaya sel'skokhozyaystvennaya opytnaya stantsiya (for Semakov).
4. Biologo-pochvennyy institut Dal'nevostochnogo filiala Sibirskogo otdeleniya AN SSSR (for Nelen).
5. Luganskiy sel'skokhozyaystvennyy institut (for Morozova).
6. Zaveduyushchiy Izbaskentskim entomo-fitopatologicheskim uchastkom (for Malinin).
7. Zaveduyushchaya Tashkent-skoy tekhnologicheskoy laboratoriyey (for Korol').
8. Gruzinskiy institut zashchity rasteniy (for Chkhubianishvili).
9. Institut botaniki AN Uzbekskoy SSR (for Askarova, Ioffe).

MALININ, V.M.; ARKIN, A.G., otv. red.; LEVINA, M.D., red.; VOLCHOK,  
K.M., tekhn. red.

[Sound detectors; a handbook] Zvukoulavlivateli; spravochnik.  
Leningrad, Sudpromgiz, 1948. 107 p. (MIRA 16:8)  
(Range finding) (Sound—Apparatus)

MAININ, V.

V

Zoukoulavliveteli (Sound Detectors)  
Leningrad, Sudpromiz, 1948  
108 p. Illus.  
Cataloged from abstract

Describes theoretical fundamentals regarding acoustic direction finding of airplanes, principles of certain elements' equipment in sound detectors, as well as technical requirements for these elements. Discusses further design and construction of some domestic and foreign sound detectors and gives explanatory data.



*MALININ, V.V.*

SKOPETS, Z.A. (Yaroslavl'); OSTROVSKIY, A.I. (Moskva); BESEIN, L.N. (Moskva);  
BALK, M.B. (Smolensk); BORSUK, M.V. (L'vov); BYKOV, A.M. (Baku);  
CHANTURIYA, Z.A. (Tbilisi); NOVIKOVA, V.S. (Orekhovo-Zuyevo); DUBNOV,  
Ya.S. (Moskva); STECHNIK, S.B. (Moskva); KHAVIN, L.P. (Leningrad);  
ERDNIYEV, P. (Stavropol'); CHIAREULI, D.L. (Gruz SSR); ASEKRITOV, U.M.  
(Yaroslavl'); GOLUBEV, V.A. (Kuvshino); MALININ, V.V. (Leningrad);  
DAVYDOV, U. (Gomel'); ROZENBERG, V.I. (Leningrad); TIKHONOV, P.G.  
(Khar'kov); ROMANCHUK, N.A. (Khar'kov); MINLOS, R.A. (Moskva); OGAY,  
S.V. (Frunze); ROFE-BEKETOV, F.S.; BERSHTEYN, A. (Moskva); ARLAZAROV,  
V.L. (Moskva)

Solutions to problems. Mat. pros. no. 4:253-270 '53.

(MIRA 12:11)

(Mathematics--Problems, exercises, etc.)

DANILIN, A.A., inzh.; MALININ, V.V., inzh.

Regulating the electromagnetic vibrator with the aid of a  
symmetrical multivibrator. Khim. mash. no.4:8-10 J1-Ag '59.  
(MIRA 12:12)

(Vibrators)

MALININ, V.V. (Leningrad)

Remarks on IU.Vol'fengaut's note "Two inverse theorems." Mat.  
v shkole no.4:66-67 J1-Ag '60. (MIRA 13:9)  
(Pythagorean proposition)

MALININ, V.V.; NUDEL'MAN, A.A.

"Necessary and adequate conditions in mathematics" by B.I.  
Krel'shtein. Reviewed by V.V.Malinin, A.A.Nudel'man. Mat.  
v shkole no.6:79 N-D '62. (MIRA 16:1)  
(Mathematics—Problems, exercises, etc.)  
(Krel'shtein, B.I.)

ISACHKIN, B.Ya. (Penza); MALININ, V.V. (Leningrad); BOGDANOV, I.M.;  
SENNOVSKAYA, F.V., obshchestvennyy metodist; ASKEROV, K. (Baku)

Draft program for mathematics in grades 9 to 11 of evening  
(staggered) secondary schools of general education. Mat. v  
shkole no.3:57-59 My-Je '63. (MIRA 16:7)

1. Inspektor po shkolam rabochey molodezhi Kalininskogo rayona  
Moskvy (for Bogdanov).  
(Mathematics—Study and teaching)

MALININ, V.V. (Leningrad)

Elements of mathematical logic in extracurricular work. Mat.  
v shkole no.5:60-66 S-O '62. (MIRA 15:12)  
(Logic, Symbolic and mathematical)

MALININ, Yu. M.

"Soviet Sound Detector Reference Book," Leningrad, 1948

180-111831; B. Reblinder, *Timent* 19, No. 3, 14-16 (1963); Shestoporov, et al., *C.A.* 47, 5853. The plastifying agent concerned is the waste brine from sulfite cellulose manufg., with which the cement is ground. The brines contain Ca salts of lignosulfonic acids, sugar, org. acids, etc. The improvement of workability is a colloid-phys. phenomenon, caused by the formation of surface-active adsorption layers around the grains of cement. The  $3\text{CaO} \cdot \text{Al}_2\text{O}_3$  content of the portland cement is important for the efficiency of this reaction; the mech. strength of a portland cement with lower  $3\text{CaO} \cdot \text{Al}_2\text{O}_3$  is increased with increased sulfite cellulose brine addus. For portland cements rich in  $3\text{CaO} \cdot \text{Al}_2\text{O}_3$ , a variation between 0.1 and 0.3% sulfite cellulose brine does not affect the mech. properties. The plasticity of the cement mortar is much improved by the addit. of the sulfate cellulose brine, and the need of the mortars for  $\text{H}_2\text{O}$  is reduced for a const. workability degree. The grindability of the portland cement is also improved. Reductions up to 10% of the portland cement content of a concrete mix of const. workability are observed and practically proved. Particularly important is the improved frost resistivity of the plastified concrete mixes. W. Eitel



MALININ, Yu. S.

Dissertation: "Investigation of the Effect of Impurities of Sulfite-Alcohol Liquor on the Properties of Cement and Concrete." Cand Tech Sci, ALL-Union Sci Res Inst of Glass, Ministry of the Building Materials Industry USSR, 20 Apr 54. (Vechernyaya Moskva, Moscow, 9 Apr 54)

SO: SUM 243, 19 Oct 54

MALININ, YU S.

USSR/Chemical Technology - Chemical Products and I-10  
Their Applications - Silicates. Glass.  
Ceramics. Binders.

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, 9066

Author : Malinin, Yu.S.

Inst :

Title : On the Effect of Reducing Substances in  
Alcoholic Sulfite Liquors on the Properties  
of Plasticized Cement.

Orig Pub : Zh. prikl. khimii, 1956, Vol 29, No 4, 486-489

Abstract : The method of paper partition chromatography  
has been applied to the analysis of the groups  
of reducing substances (RS) present in alco-  
holic sulfite liquor (ASL). The effect of  
the Pb content in ASL concentrates on the  
strength of cement mortars has been investigated.

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USSR/Chemical Technology - Chemical Products and I-10  
Their Applications - Silicates. Glass.  
Ceramics. Binders.

Abs Jour : Ref Zhur - Khimiya, No 3, 1957, 9066

The cements were prepared from clinkers of carrying mineral composition ( $C_3S$  45.6-58%,  $C_2A$  4.8-14.2%). The weight of ASL concentrates was calculated at 0.1, 0.2 and 0.3% of the weight of the clinker. The RS content in the concentrates was 4.72-15.0%. Additional tests were carried out with the addition of synthetic mixtures of the ASL components calculated at 0.2% of the weight of the clinker. Tests were also carried out using 100% xylose and glucose. It has been established that a RS content in the ASL of up to 15% has no marked effect on the strength of the cement stone; the latter was also unaffected by the qualitative composition of the ASL.

Card 2/2

*MALININ, YU.S.*

28-1-19/42

AUTHOR: Skramtayev, B.G., Regular Member of the Academy of Building and Architecture of the USSR, and Gorchakov, G.I., Malinin, Yu.S.,  
Candidates of Technical Sciences

TITLE: Inadequacies in Cement Standards (Nedostatki v standartizatsii tsementov)

PERIODICAL: Standartizatsiya, # 1, Jan-Feb 1957, p 61-64 (USSR)

ABSTRACT: The article represents a critical review of current USSR standards for cement. Standardization of cement and cement testing methods lags behind the growing production of pre-fabricated reinforced concrete, and a revision is overdue. There is only one standard for the most extensively used grade, Portland cement (including some grades like the Puzzolan and the slag-Portland, irrespective of composition and intended service) and several standards for special cements as the white or the alumina cement. The cements are not subdivided by composition and service conditions, as it is done in other countries. The quality is evaluated by many factors: by obsolete test methods and equipment and by compression and tension tests lasting for 3, 7, and 28 days. Gosstroy and the Ministry for Building Materials stubbornly retain

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Inadequacies in Cement Standards

28-1-19/42

the obsolete methods, although improved methods were developed long ago by special institutions (NIIItsement, Giprotsement, and others). The inadequacies of the practiced tests are mentioned: the proportion of water is less than used in actual production; samples are prepared by forced stamping, while in practice plastic concrete mixtures are compacted almost exclusively by vibration, and hard mixtures are compacted by vibration under load. The shape of strength test samples (8-shaped) causes high local stresses. (At this point, comparison is made with the German standard method of testing, which is called practical). The so-called normal (Vol'sk) sand used for cement tests is one-fractional, with 0.50 - 0.80 mm grains, causes high porosity of samples and reduces their strength. (Comparison is made with sand used in France, Germany, USA, and included in the international standard project). Normal density and setting time is being determined without sand, whereas in practice it is never done this way. Testing by needle and pestle immersion is long obsolete and gives no accurate data, while there are modern methods and devices to measure the viscosity and the shift resistance of sand-cement solution, and not of cement dough. The strainer used for evaluation of grain size has coarse mesh through which 85-95 % of the mass gets through, so that the

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Inadequacies in Cement Standards

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actual grain size cannot be known. Deryagin's method - described in an edition of the Academy of Sciences, 1953, is mentioned, a device for the measuring of air permeability, which differs from the method used abroad and from the Russian Towarov method and enables closer evaluation of specific surface. Shrinkage and expansion of Portland cement is not measured in tests; only the presence or the absence of visual cracks on test cakes has to be stated, as is required by the standard. This does not represent the actual service conditions for cement. The authors give recommendations for new standards in which the following devices and methods are mentioned: a small vibration table (shown in illustration); two short-time methods of evaluation of cement grade, involving steam treatment of samples; a device for measuring grain sizes (an adaptation of Deryagin's device by NIItsement); a simple device for evaluation of normal density and setting of cement (shown by an illustration). The American shrinkage measuring method (Carlson) is recommended. It is stated that cement standards have to be revised in 1-2 years.

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Inadequacies in Cement Standards

28-1-19/42

ASSOCIATIONS: Akademiya stroitel'stva i arkhitektury; VIA im. Kuybysheva;  
Inzhenerno-stroitel'nyy institut im. Kuybysheva; NIItsement

AVAILABLE: Library of Congress

Card 4/4

*MALININ, Yu. S.*

MALININ, Yu. S., kand. tekhn. nauk.

B.V. Deriagin's method of determining specific surfaces.

TSement 23 no.6:19-21 N-D '57.

(MIRA 11:1)

(Surfaces--Areas and volumes)



16

SOV/101-58-6-7/13

AUTHORS: Malinin, Yu.S., and Kapkin, M.M.

TITLE: The Measurement of the Hardening Process of Cement During Steaming by the Method of Contraction (Izmereniye metodom kontraktsii protsessa tverdeniya tsementa pri preparivani)

PERIODICAL: Tsement, 1958, Nr 6, pp 23-26 (USSR)

ABSTRACT: Volume changes in hardening cement are measured by hydrostatic suspension of a specimen in an inert liquid. The chemical and mineralogical composition of the clinkers tested is shown in table 1. The contraction curves (Figure 1) demonstrate that contraction increases if the duration of the temperature increase lengthens from 2 to 8 hours; that it also increases in isothermal heating during the first 2 hours; that a further isothermal heating to 14 hours does not increase contraction; that a reduction of temperature is

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S.W./101-56-6-7/13

The Measurement of the Hardening Process of Cement During Steaming by the Method of Contraction

accompanied by an increase in contraction. Principally, the hydration reactions during steaming of cement take place during the period of temperature increase. In the isothermal process, the hydration products of clinker start passing into the crystalline state. The degree of crystallization is directly dependent on the duration of the isothermal heating. There are 3 sets of graphs, 1 table and 4 Soviet references.

Card 2/2

S/08:61/000/019/052/085  
B1:7/B110

AUTHORS: Kholin, I. I., Entin, Z. B., Malinin, Yu. S.

TITLE: Interaction of  $\beta$ -C<sub>2</sub>S and C<sub>3</sub>S with barium oxide

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19, 1961, 314, abstract 19K299 (Nauchn. soobshch. Gos. Vses. n.-i. in-t tsementn. prom-sti no. 10(41), 1961, 24-29)

TEXT: The interaction of C<sub>3</sub>S and  $\beta$ -C<sub>2</sub>S with BaO in the solid phase at 1400-1470°C was investigated. The annealed products of various mixtures of these oxides were subjected to X-ray structural, chemical, and microscopic analyses for determining their composition. An intensive decomposition of the Ca silicate with separation of free lime and BaO absorption was found to take place during the interaction of  $\beta$ -C<sub>2</sub>S and C<sub>3</sub>S with BaO in the solid phase. Binary Ca-Ba orthosilicate which can dissolve up to 2-3 mole% CaO is formed. With sufficient BaO amounts, the interaction of  $\beta$ -C<sub>2</sub>S with BaO takes place with simultaneous formation

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S/081/61/000/019/052/085  
B 17/B 110

Interaction of  $\beta$ -C<sub>2</sub>S and...

of two phases, one of which is CaO·BaO·SiO<sub>2</sub>. Therefore, this compound is a certain chemical compound ( $N_g = 1.767 \pm 0.006$ ,  $N_p = 1.754 \pm 0.006$ ) which is capable of forming with Ca orthosilicate a continuous series of solid solutions. It is not possible to increase the basicity of the binary orthosilicate at the expense of the free lime contained in the sample by repeated annealing. The possibility of increasing the basicity by increasing the BaO content has not been investigated. [Abstracter's note: Complete translation.] ✓

Card 2/2

S/081/63/000/002/047/088  
B156/B144

AUTHORS: Kholin, I. I., Malinin, Yu. S., Entin, Z. B.

TITLE: Effects of baking temperature on kinetics of clinker formation

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1963, 386, abstract 2M160 (Tr. Gos. Vses. n.-i. in-ta tsementn. prom-sti, no.15, 1961, 32-38)

TEXT: The effects of small temperature variations ( $10^{\circ}\text{C}$ ) in the range close to eutectic on the assimilation rate of lime in clinkers synthesized from chemically pure reagents and corresponding, by composition, to high-alite clinker (3 specimens) and standard Portland cement (3 specimens) have been studied. Two specimens contained no iron, and their compositions corresponded to those of white cements. The iron-free clinkers were investigated at every  $10^{\circ}\text{C}$  between  $1390$  and  $1470^{\circ}\text{C}$  (eutectic point was taken as  $1455^{\circ}\text{C}$ ); the remainder were investigated at  $1320$ - $1420^{\circ}\text{C}$  (eutectic at  $1338^{\circ}\text{C}$ ). An abrupt decrease in the  $\text{CaO}_{\text{free}}$  content was found in the specimens containing  $\text{Fe}_2\text{O}_3$  at temperatures above eutectic, ✓

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Effects of baking temperature ...

S/081/63/000/002/047/088  
B156/B144

this corresponding to the formation of  $C_3S$  by melting. In the case of the specimens not containing  $Fe_2O_3$ , a marked acceleration of binding of the lime was observed after the eutectic point, but even at temperatures below this point the specimens contained a considerable amount of  $C_3S$ .

The reason why  $C_3S$  forms at these temperatures lies in the melting of the finest particles in the mixtures (the aluminates) at temperatures well below eutectic. The micromelts thus formed serve as contact media for heterophase reactions; this is confirmed by the considerable shrinkage of specimens at these temperatures. [Abstracter's note: Complete translation.] ✓

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24428

S/080/61/034/007/002/016  
D223/D305

153200

AUTHORS: Kholin, I.I., Entin, Z.B., and Malinin, Yu.S.  
TITLE: Reaction of clinker silicates with barium oxide  
PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 7, 1961,  
1419- 1430

TEXT: The system, corresponding to the usual Portland-cement clinker but in which part of  $\text{CaO}$  is substituted with  $\text{BaO}$ , has for some time now been the object of attention of specialists in the field of building materials. Such a substitution could add to the cement properties such as an increase in resistance to attack of sea-water, and greater protective power against powerful x-ray radiation. The present work involves the study of interaction in solid form between  $\text{C}_3\text{S}$  and  $\beta\text{-C}_2\text{S}$  with barium oxide, the composition of the product of heated mixtures of oxides and also the phase composition of the clinker containing  $\text{BaO}$ . The initial materials for preparing samples were previously synthesized  $\text{C}_3\text{S}$  and  $\beta\text{-C}_2\text{S}$ , and sta-

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Reaction of clinker silicates ...

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S/080/61/034/007/002/016  
D223/D305

bilized with 0.5 %  $B_2O_3$  iron oxide, alumina and anhydrous  $SiO_2$ . The alkaline earth oxide was added to the charge in the form of carbonates. All materials were sieved through a screen 0064 (about 10,000 holes/cm<sup>2</sup>), mixed according to the Bogue method, and then formed into cylindrical tablets weighing 1 g. The tablets were heated in a silica or platinum furnace on a platinum base hence preventing contamination. The base was heated to 1400 or 1470°C for 4 hours after which the samples were kept at constant temperature for 2 hours. After this they were left in air for rapid cooling or left in a silica furnace to cool. The analysis shows that different cooling procedure did not produce any difference between samples. The cooled samples were x-ray analyzed using powder method and machine YPC-57-N (URS-5P-I) and also surveyed by immersion. In addition, the content of free lime was determined by an alcohol-glycerol method. The results of investigation have shown that interaction of solid phases of  $\beta-C_2S$  and  $C_3S$  with  $BaO$  resulted in the decomposition of calcium silicates yielding free lime by substitution of  $BaO$ . Double calcium-barium orthosilicate is formed, capa-

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S/080/61/034/007/002/016  
D223/D305

Reaction of clinker silicates ...

ble of containing in solid solution a small excess of CaO. The interaction of  $\beta$ -C<sub>2</sub>S with BaO, with a sufficient quantity of barium oxide, resulted in the simultaneous formation of two phases, one of which was CaO.BaO.SiO<sub>2</sub>. This compound appears as a definite chemical compound ( $N_g = 1.767 \pm 0.006$ ;  $N_g = 1.754 \pm 0.006$ ) capable of forming a continuous series of solid solutions with calcium orthosilicate. The increase in basicity of double silicate by heating with free lime was not achieved, and the possibility of increasing the basicity by increasing the BaO content above one mole was not investigated. The presence of barium ions (Ba<sup>++</sup>) in the crystalline lattice of silicate was detected by P.F. Konovalov, A.N. Yefremov and B.V. Volkonskiy (Ref. 10: Ionizatsiyonnaya rentgenostrukturnaya ustanovka dlya issledovaniya kristallicheskikh veshchestv pri razlichnykh temperaturakh (Ionization, X-ray Structural Device for the Investigation of Crystalline Matter at Different Temperatures) L. 1958). In partial substitution of clinker lime with barium oxide the latter in the main enters into the composition of the silicate. When substituting 0.5 mole % lime on barium oxide the

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24428

S/080/61/034/007/002/016  
D223/D305

Reaction of clinker silicates ...

latter appears as an active mineralizer. At a BaO concentration of a few percent or more, the cementing in clinker does not form and the clinker contains a considerable amount of free lime. There are 7 figures, 3 tables and 10 references: 4 Soviet-bloc and 6 non-Soviet-bloc. The references to the English-language publications read as follows: R. Eskola, Am. j. Sci., 5, 4, 331, 1922; Bogue, The chemistry of portlandcement. II add., 1955.

SUBMITTED: October 10, 1960

Card 4/4

S/081/62/000/024/073/073  
B166/B186

AUTHORS: Malinin, Yu. S., Ryazin, V. P., Volkov, O. S.

TITLE: Quantitative determination of the mineralogical composition of clinker by X-ray diffractometry

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1962, 593, abstract 24K434 (Tsement, no. 3, 1962, 14 - 16)

TEXT: A JPC-50M (URS-50I) X-ray diffractometer with a focusing crystal monochromator was used for quantitative phase analysis of the clinkers of a number of cement plants.  $\text{CaF}_2$  was taken as the internal standard. Calibration curves were plotted from synthetic clinker minerals ground to pass a 0.063 mm sieve. These curves were used to study the clinkers from a number of cement plants and also several specimens of fused cement. The data obtained on  $\text{C}_2\text{S}$  and  $\text{C}_3\text{A}$  content in general agreed satisfactorily with the results of the petrographic determination of these minerals. The content of aluminoferrites and  $\text{C}_3\text{A}$  has to exceed 5% before they can be determined, and  $\text{C}_2\text{S}$  can only be determined if it is present in a quantity >15%.  
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quantitative determination ...

[Abstracter's note: Complete translation.]

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S/076/62/036/002/008/009  
B152/B110

AUTHORS: Malinin, Yu. S., and Entin, Z. B. (Moscow)

TITLE: Vibro-viscoconductometer for measuring and recording the viscosity and electrical conductivity of high-temperature melts

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 2, 1962, 399 - 400

TEXT: A description is given of: (1) the determination of the viscosity of melts with this device: A movable copper rod is placed in the field of two annular magnets, the like poles of which face each other. The rod is linked to the operating body by a flexible strip of flat soft steel. The operating body is made of platinum and has the shape of a cylindrical bell of 14 mm diameter welded on a platinum pedicle. The whole operating body weighs about 12 g. Two plate springs fix the rod which carries two coils of 800 turns each. The natural frequency of the system consisting of the rod and the operating body is to agree with commercial frequency (50 cps), which can be achieved by adjusting two weights on the upper spring. The electromagnetic system is mounted upon a rigid steel stand and provided

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with air dampers. The device is fed by an CH3-120/0.1 (SNE-120/0.1) voltage stabilizer through a step-down transformer, a meter switch, and the primary winding of a differential transformer. The input voltage of the apparatus is 0.8 - 1.3 v. The secondary voltage of the differential transformer depends only on the oscillation amplitude of the frame, which, in the case of resonance, is only a function of viscosity. This voltage is put through a single-cascade amplifier to a recording millivoltmeter. The scale of viscosity has been graduated using castor oil. (2) The electrical conductivity is measured by the unbalanced bridge technique. The branches of the bridge consist of Constantan resistors:  $R_1 = R_2 = R_3 = R_4 = 100$  ohms. The bridge is fed with 3 - 12 v by the voltage stabilizer SNE 120/0.1 through a step-down transformer and a meter switch. The single-cascade amplifier is assembled on a П-16 (P-16) triode. The output passes a ДГЦ-23 (DGTs-23) diode. In one branch in series lie the cell consisting of crucible (26 mm in diameter) and the operating body. The voltage of the bridge diagonal is connected to the second channel of the galvanometer through a single-cascade amplifier. The vibration of the operating body does not affect the indication in the conductivity circuit. Graduation has been carried out by means of a resistance box. To measure

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the resistance of the leads, the operating body was dipped in to the bottom of the crucible. For this purpose, a resistance box was used. The viscosimeter possesses a platinum-rhodium furnace designed to heat samples to 1500°C. The furnace rests upon a platform that can be displaced vertically. The sample is put in as powder. After melting the furnace is lifted until the molten mass touches the operating body. The instant of contact is fixed by the pilot lamp  $\lambda$  (L). 30 - 40 g of material is needed for one measurement. Temperature is regulated by a platinum-platinum-rhodium thermocouple, and viscosity and conductivity are measured while temperature decreases by 3 - 4°C/min. The results obtained could be reproduced well; deviations of parallel measurements did not exceed 5 - 7% of the measured value. There are 1 figure and 3 Soviet-bloc references. ✓

ASSOCIATION: Nauchno-issledovatel'skiy institut tsementnoy promyshlennosti  
(Scientific Research Institute of the Cement Industry)

SUBMITTED: July 7, 1961

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MALININ, Yu.S., kand.tekhn.nauk; RYAZIN, V.P., inzh.; VOLKOV, O.S., inzh.

Quantitative X-ray phase analysis of clinker. Trudy NITTSement  
no.17:3-12 '62. (MIRA 16:5)  
(X rays—Industrial applications) (Cement clinker—Analysis)



MALININ, Yu.S., kand.tekhn.nauk; KLISHANIS, N.D., inzh.; RYAZIN, V.P., inzh.

Study of the alite phase. Trudy NIISement no.17:13-19 '62.  
(MIRA 16:5)  
(Cement clinkers) (X rays--Industrial applications)

MALININ, Yu.S., kand.tekhn.nauk

Unit for studying the hydration process of cement at normal temperatures. Trudy NIITsement no.17:27-33 '62. (MIRA 16:5)  
(Cement--Testing)

MALININ, Yu.S., kand.tekhn.nauk

Device for microthermal analysis. Trudy NIITsement no.17:34-38  
'62. (MIRA 16:5)

(Cement—Analysis)

MALININ, Yu.S., kand.tekhn.nauk; KEL'TSEVA, Z.A., inzh.; VOROB'YEV, V.A., inzh.

Method of studying the composition of the liquid phase of hardening  
cement. Trudy NIITsement no.17:39-44 '62. (MIRA 16:5)  
(Cement--Analysis)